

CHAPTER 9: ALTERNATIVES ANALYSIS

INTRODUCTION

In the completion process for the Sheboygan TDP, several issues have been identified concerning the services of Shoreline Metro. The process used in completing the TDP included discussions with Shoreline Metro staff, meetings with the TDP review committee, and a ridership opinion survey. Based on issues that were identified and input from various sources regarding the services of Shoreline Metro, several alternative configurations of the transit system were developed and analyzed. Based on review of the initial alternative configurations of the transit system, such configurations were refined, and the analysis described in this chapter was conducted.

The alternative configurations of the transit system ranged from maintaining status quo fixed-route service, to elimination of transfers, to modifying the service day so that it runs from 5:00 a.m. to 8:00 p.m. on weekdays, to having routes leave at the top (:00) and the bottom (:30) of the hour, to offering demand response service during weeknights. Other alternatives that will be briefly discussed but not fully analyzed include limited restoration of 30 minute service on Saturdays (could be considered for busier routes, such as Routes 10 North and 10 South), offering transit service to outlying communities that currently do not have such service, and restructuring or minor changes to existing routes; these alternatives are considered outside the scope of this TDP, but may be considered in the future. Each of the alternative configurations of the transit system has been evaluated based on the goals for transit service in the area, projected productivity, number of passengers, and cost of operation.

ALTERNATIVES EXAMINED IN MAY 2020

Alternative A: Continuation of Status Quo Fixed-Route Transit Service

This alternative would maintain existing fixed-route transit service throughout the area with no changes. In 2018, the service averaged 15.53 non-ADA passengers per revenue hour at a cost per passenger (fixed-route service costs only) of \$4.84. Several assumptions were made in the development of this alternative, including the following:

1. There would be no changes to existing fixed-route service throughout the service area, including route miles and service hours.
2. There would be no changes in fares.
3. Revenue miles, revenue hours and ridership all came from the fixed-route component of the National Transit Database (NTD) report for Shoreline Metro in 2018.
4. Revenues and expenses account for fixed-route and ADA paratransit services (no county paratransit services were included). This assumption applies to all of the alternatives examined in this analysis.
5. “Other non-subsidy revenues” exclude parking utility revenues. This assumption applies to all of the alternatives examined in this analysis.
6. The federal, state and local shares financing transit service under this alternative were proportioned to fixed-route plus ADA paratransit service, with the combined federal and state share being 53.9 percent of expenses. This assumption applies to all of the

alternatives examined in this analysis.

7. The costs per passenger, revenue mile and revenue hour all excluded ADA paratransit expenses (covered fixed-route operations only). This assumption applies to all of the alternatives examined in this analysis.
8. The numbers of passengers per revenue mile and revenue hour are for fixed-route operations only. This assumption applies to all of the alternatives examined in this analysis.
9. The farebox revenue per passenger involved fixed-route (non-ADA) revenue divided by fixed-route ridership. This assumption applies to all of the alternatives examined in this analysis.

The route structure was indicated on Map 3.1 of this TDP, and represents the existing route structure. Table 7.2 of this TDP indicates individual 2018 costs by route for this “no change” alternative. Table 9.1 indicates the service, ridership and financial implications of this alternative in the base year of 2018.

Alternative B: Elimination of Transfers

This alternative would eliminate transfers for a variety of reasons. One of these would be to encourage use of the day pass (along with the monthly pass and other payment methods that no longer involve depositing money or tokens in the farebox or giving the driver a paper transfer slip) as the preferred method of payment for trips. This would allow for a “cleaner” way to utilize transit in the era of COVID-19. Several assumptions were made in the development of this alternative, including the following:

1. Increase the fixed-route cash fare slightly, from \$1.75 to \$2.00. This would make paying the cash fare easier in that passengers would not need to scramble to find exact change.
2. Increase the ADA cash fare slightly, from \$3.50 to \$4.00.
3. Increase the elderly and disabled half fare slightly, from 85 cents to \$1.00.
4. Tokens would be eliminated as a fare media option. Few student tokens are now sold, since most K – 12 students who use Shoreline Metro attend the Sheboygan Area School District (SASD) and ride free of charge through an agreement between the SASD and Shoreline Metro. However, this would mainly impact adults who currently use tokens.
5. Riders would now need to pay every time they boarded a bus, even if changing buses at the downtown transfer point or elsewhere. Additional fares could be avoided through use of a day pass, monthly pass, or by being a student or employee of the SASD.
6. Revenue miles and revenue hours would remain unchanged from Alternative A.
7. For this alternative, a fare elasticity of -0.43 was applied to the portions of the fixed-route ridership that utilize cash fares. Shoreline Metro staff instructed Bay-Lake Regional Planning Commission staff to apply the fare increase to all cash fare categories for purposes of the alternatives analysis; this essentially meant a 14.3 percent increase in the cash fare and a 17.6 percent increase in the elderly and disabled half fare. These cash fare increases are predicted to lead to a decrease in ridership for this alternative in comparison to Alternative A. These calculations affected ridership, farebox revenues and ADA revenues. In addition, fixed-route “ridership” would decrease due to the elimination of

transfers under this alternative. The total amount of decrease in fixed-route ridership would be just over 1.2 percent. However, fixed-route farebox revenues would increase by 4.1 percent under this alternative.

8. ADA ridership would decrease by about 6.1 percent under this alternative, due to the ADA cash fare increasing by 14.3 percent. However, ADA paratransit farebox revenues would increase by 7.3 percent under this alternative.
9. Other non-subsidy revenues, federal and state funding, Community Development Block Grant (CDBG) funding, and local governmental funding for Shoreline Metro would all remain unchanged under this alternative.

Table 9.1 indicates the service, ridership and financial implications of this alternative in the base year of 2018.

Alternative C: Service Day from 5:00 a.m. to 8:00 p.m. and Having Routes Leave at the Top (:00) and Bottom (:30) of the Hour

This alternative was proposed for several reasons. First, it has been difficult for Shoreline Metro to get everyone to work at “first shift” jobs by 6:00 a.m. the way things are currently set up. Leaving at the top and at the bottom of the hour also makes sense for many employers in the Sheboygan area. Later evening transit service does not serve many passengers at this point. The City of Sheboygan’s new industrial park would also be better served by these changes. Several assumptions were made in the development of this alternative, including the following:

1. Service hours would be from 5:00 a.m. to 8:00 p.m. Monday through Friday on numbered City of Sheboygan routes (3 North through 10 South). Service would be provided every half hour from 5:00 a.m. to 5:00 p.m., and would be provided hourly (with alternating North and South Shuttles) from 5:00 p.m. to 8:00 p.m. North and South Shuttles would also operate at the end of the service day at 8:00 p.m. on weekdays.
2. Route 20 North would run at the following times on weekdays: 5:30 a.m., 6:30 a.m., 7:00 a.m., 11:00 a.m., and 7:00 p.m. Route 20 South would run at the following times on weekdays: 9:00 a.m., 1:00 p.m., 3:30 p.m., and 6:00 p.m. With the exception of the half hour Kohler Company Special run at 6:30 a.m., all other trips on Route 20 would be one hour in length.
3. Route 40 would run every half hour on weekdays from 12:15 p.m. to 8:15 p.m. on weekdays between mid-June and Labor Day weekend.
4. Service hours would be from 7:30 a.m. to 5:30 p.m. on Saturdays on numbered City of Sheboygan routes. Service would be provided once every hour (leaving at the bottom of the hour on the “north” routes, and leaving at the top of the hour on the “south” routes). Alternating North and South Shuttles would be provided throughout the service day on Saturdays. North and South Shuttles would also operate at the end of the service day at 5:30 p.m. on Saturdays.
5. Route 20 North would run at the following times on Saturdays: 9:00 a.m., 12:00 noon, and 3:00 p.m. Route 20 South would run at the following times on Saturdays: 11:00 a.m. and 1:00 p.m. All of these trips would be one hour in length.
6. Route 40 would run every half hour from 11:45 a.m. to 5:45 p.m. on Saturdays between

mid-June and Labor Day weekend.

7. Adjustments to the service day led to a decrease in revenue miles compared with the baseline of more than 0.6 percent. These adjustments also led to a decrease in revenue hours compared with the baseline of nearly 0.8 percent. This was due to the elimination of two North and South Shuttle trips on weekdays, cutting the last hour of Route 40 on Thursdays and Fridays, and elimination of two North and South Shuttle trips on Saturdays.
8. Fixed-route ridership is projected to decrease by about 0.8 percent under this alternative. Elimination of the last hour of evening service on weekdays would lead to a 2.76 percent decrease in ridership. However, adding service at the beginning of the service day would lead to a 1.94 percent increase in ridership.
9. The cost allocation model in Chapter 7 (Table 7.1) was used to estimate expenses under this alternative. These expenses were \$3,376,214, or a 0.6 percent decrease over the baseline.
10. Farebox revenues were projected to decrease in proportion to the decrease in ridership. On the other hand, ADA revenues (and ridership) were projected to remain stable, as most ADA trips take place during daytime hours.
11. Other non-subsidy revenues were projected to remain unchanged from the baseline.
12. The federal and state shares decreased in proportion to the decreased overall expenses.
13. The HUD subsidy remained unchanged from the baseline.
14. The local share remained unchanged from the baseline.

Table 9.1 indicates the service, ridership and financial implications of this alternative in the base year of 2018.

Alternative D: Demand Response Service During Weeknights and Saturdays

This alternative would replace fixed-route transit service with demand-response paratransit service on weekdays after 5:45 p.m. and all day on Saturdays. Several assumptions were made in the development of this alternative, including the following:

1. It was assumed that 9.0 percent of weekday riders utilized transit at night (after 5:45 p.m.); this translated to 50,959 riders. In addition, some 33,506 Saturday riders were assumed.
2. The rate of 2.72 passengers per hour was used to develop the portion of service hours attributable to weeknight and Saturday demand response service. This was done following the subtraction of lost service hours from the fixed-route component of the alternative.
3. The rate of 4.71 miles per passenger trip was used to develop the portion of route miles attributable to weeknight and Saturday demand response service. This was done following the subtraction of lost route miles from the fixed-route component of the alternative.
4. The fare assumptions listed under Assumptions 1 through 5 in Alternative B would also apply to this alternative on all days and times of service. This will lead to a non-ADA

ridership decrease and fare revenue increase similar to what was seen in Alternative B. The ridership decreases were applied to the weekday daytime fixed-route service as well as to the weekday evening and Saturday demand-response paratransit service.

5. The ADA ridership and revenue impacts under this alternative (ridership decrease and revenue increase) are expected to be similar to Alternative B. Other impacts to ADA ridership or revenue could not be measured. If this alternative receives more serious consideration, the ADA paratransit impacts will be examined in greater detail.
6. Total expenses were developed using two separate cost allocation models: the regular model for the fixed-route service component, and a special “mini” cost allocation model for paratransit. The fixed-route and paratransit expenses were calculated separately, then were combined to arrive at total expenses. No additional fixed costs were assumed for the paratransit component above and beyond existing fixed costs, since it was assumed that administration of both services would be absorbed by the same managerial staff. Total expenses were \$3,505,192, or a 3.2 percent increase over the baseline.
7. Due to a loss in fixed-route system service hours of over 21.6 percent, the advertising portion of other non-subsidy revenues (\$32,400) was reduced accordingly, leaving a decrease in such revenues of about \$7,011 when compared to the 2018 baseline.
8. The federal and state shares increased in proportion to the decreased overall expenses.
9. The HUD subsidy remained unchanged from the baseline.
10. The local share remained unchanged from the baseline.

Table 9.1 indicates the service, ridership and financial implications of this pair of alternatives in the base year of 2018.

OTHER CONSIDERATIONS

Restoration of 30 minute service on Saturdays was not generally advanced as an alternative. However, 30 minute service may be considered for busier routes (such as Routes 10 North and 10 South) in the future.

Service to outlying communities that currently do not receive service (such as the Town of Sheboygan) was not advanced as an alternative at this time, but will be considered if Shoreline Metro and outlying communities reach an agreement regarding service.

Restructuring/minor changes to existing routes was not advanced as an alternative at this time, but may be examined once Shoreline Metro emerges from the COVID-19 pandemic.

Sheboygan MPO staff with the Bay-Lake Regional Planning Commission are prepared to examine these and other service considerations for Shoreline Metro upon request of the transit operation in the future.

SELECTION, APPROVAL AND IMPLEMENTATION OF THE FINAL “PREFERRED” ALTERNATIVE

The Shoreline Metro TDP Review Committee selected a combination of Alternatives B and C as the “preferred” alternative at their meeting on July 15, 2020. This discussion began at the June 17, 2020, meeting, but the committee asked Shoreline Metro management to survey the ridership regarding the alternatives seriously being considered in this TDP. Alternative B was selected

due to sanitary considerations, while Alternative C was selected due to the need to get passengers to employment that begins early in the morning, along with tremendous support for this alternative in the survey of the ridership. Committee members unanimously selected a combination of Alternatives B and C as the package of transit policies that should be implemented in the TDP; this does not preclude selection of other service parameters (such as features that increase service and implementation of portions of Alternative D) in later years of the period covered by the TDP. In addition, there was a slight adjustment to Alternative C in that Saturday service would run from 7:00 a.m. to 5:00 p.m.

Table 9.1: Impacts of the Alternate Configurations for Shoreline Metro: Shoreline Metro Transit Development Program (For the 2018 Base Year)

	Alternative A: Continuation of Status Quo Fixed-Route Transit Service	Alternative B: Elimination of Transfers	Alternative C: Service Day from 5:00 a.m. to 8:00 p.m., and Having Routes Leave at the Top (:00) and Bottom (:30) of the Hour	Alternative D: Demand Response Service During Weeknights and Saturdays
Revenue Miles	536,426	536,426	533,001	814,889
Revenue Hours	38,611	38,611	38,307	60,922
Ridership	599,714	592,238	594,796	592,238
Cost per Passenger	\$4.84	\$4.90	\$4.85	\$5.09
Cost per Revenue Mile	\$5.41	\$5.41	\$5.41	\$3.70
Cost per Revenue Hour	\$75.19	\$75.19	\$75.33	\$49.43
Passengers per Revenue Mile	1.12	1.10	1.12	0.73
Passengers per Revenue Hour	15.53	15.34	15.53	9.72
Farebox Revenue per Passenger	\$0.67	\$0.71	\$0.67	\$0.71
Expenses	\$3,396,699	\$3,396,699	\$3,376,214	\$3,505,192
Farebox Revenues	\$401,128	\$417,657	\$397,838	\$417,657
ADA Revenues	\$203,071	\$217,916	\$203,071	\$217,916
Other Non-Subsidy Revenues	\$197,005	\$197,005	\$197,005	\$189,994
Deficit	\$2,595,495	\$2,564,121	\$2,578,299	\$2,679,625
Federal Share	\$1,170,891	\$1,170,891	\$1,163,829	\$1,208,290
HUD Subsidy	\$42,493	\$42,493	\$42,493	\$42,493
State Share	\$826,485	\$826,485	\$821,500	\$852,884
Local Share	\$601,622	\$601,622	\$601,622	\$601,622
Balance	\$45,996	\$77,370	\$51,146	\$25,664

Source: Shoreline Metro, 2018, 2019 and 2020; and Bay-Lake Regional Planning Commission, 2020.